

IN THE CLAIMS

Please cancel claims 1-15 and 18-23 without prejudice, and add claims 26-31 as follows.

1. (Canceled) A building unit system comprised of discrete, non-geometric units adapted to be fit together, said units comprising at least first units and second units, both of said first units and said second units having irregularly shaped sides, said second units being of a different size or shape than said first units, both said first units and said second units having sides that mate with other first units and mate with other second units, said units adapted to form a continuous surface or structure without overlap between units or large gaps between units and having a non-repeating pattern appearance.

2. (Canceled) A building unit having a plurality of faces, at least one face comprised of x primary elements, wherein x is an integer equal to or greater than 2, each primary element being a rotational tessellation having

a first side extending in a generally radial direction relative to a first vertex, said first side being irregularly shaped;

a second side extending in a generally radial direction relative to the first vertex, said second side being substantially a rotational image of said first side and being

rotationally spaced from said first side by a first angle of 360 degrees divided by n , where n is an integer greater than or equal to 3;

a third side extending in a generally radial direction relative to a second vertex, the second vertex being spaced from the first vertex, and

a fourth side extending in a generally radial direction relative to the second vertex and being substantially a rotational image of said third side and rotationally spaced there from by a second angle of 360 degrees divided by m , where m is an integer greater than or equal to 2.

3. (Canceled) A building unit as in claim 2, wherein the first and second angles are not equal.

4. (Canceled) A building unit as in claim 3, wherein the first angle is 60 degrees and the second angle is 180 degrees.

5. (Canceled) A building unit as in claim 3, wherein the first angle is 60 degrees and the second angle is 120 degrees.

6. (Canceled) A building unit as in claim 3, wherein the first angle is 90 degrees and the second angle is 180 degrees.

7. (Canceled) A building unit as in claim 2, comprising at least three of said primary elements, at least two of said elements sharing a common first vertex and at least two of said elements sharing a common second vertex.

8. (Canceled) A building unit as in claim 2, wherein said primary element further comprises a fifth side and a sixth side extending in a generally radial direction relative to a third vertex, said sixth side being substantially a rotational image of said fifth side, said fifth and sixth sides being rotationally spaced by a third angle, and where in the sum of the first, second and third angles is 360 degrees.

9. (Canceled) A tessellated surface covering or structure comprised of units, without substantial gaps or overlap between units, characterized in that

the surface covering or structure has a non-repeating pattern appearance, and each of said units has at least one face, said at least one face is comprised of x primary elements, where x is an integer equal to or greater than 1, and said primary element is a rotational tessellation comprising

a first side extending in a generally radial direction relative to a first vertex, said first side being irregularly shaped;

a second side extending in a generally radial direction relative to said first vertex and being rotationally spaced from said first side by a first angle of 360 degrees

divided by n , where n is an integer greater than or equal to 3, said second side being substantially a rotational image of said first side;

a third side extending in a generally radial direction from a second vertex, said third side being irregularly shaped, said second vertex being spaced apart from said first vertex; and

a fourth side extending in a generally radial direction from said second vertex, said fourth side being substantially a rotational image of said third side, said fourth side being rotationally spaced from said third side by a second angle of 360 degrees divided by m , where m is an integer greater than or equal to 2, said second angle being different from said first angle.

10. (Canceled) A tessellated surface covering or structure as in claim 9 comprising a plurality of first units, each first unit comprised of at least one primary element; and a plurality of second units, each second unit comprised of at least two primary elements.

11. (Canceled) A tessellated surface covering or structure as in claim 10 further comprising a plurality of third units, each said third unit comprised of at least three primary elements.

12. (Canceled) A system of irregular building units, comprising
a multiplicity of first units and a multiplicity of second units adapted to be
assembled to form a continuous surface without overlap between units and without large
gaps between units, said second units being a different size and shape than said first units;
each said unit having a face comprised of x primary elements, where x is an
integer equal to or greater than 1, said first units comprising at least one primary element
and said second units comprising at least two primary elements; and
said primary element being a rotational tessellation having
a first side extending in a generally radial direction relative to a first
vertex, said first side being irregularly shaped;
a second side extending in a generally radial direction relative to the
first vertex, said second side being substantially a rotational image of said first side and
being rotationally spaced from said first side by a first angle of 360 degrees divided by n ,
where n is an integer greater than or equal to 2;
a third side extending in a generally radial direction from a second
vertex, said third side being irregularly shaped, said second vertex spaced apart from said
first vertex; and
a fourth side extending in a generally radial direction from the
second vertex, said fourth side being substantially a rotational image of said third side,

said fourth side being rotationally spaced from said third side by a second angle, the sum of the first and second angles being 180, 240, 270 or 300 degrees.

13. (Canceled) A system as in claim 12 comprising a multiplicity of third units, each said third unit formed of at least two primary elements and having a size or shape different from both said first units and said second units.

14. (Canceled) A system as in claim 12 wherein some of said units have surface variations different from other ones of said units.

15. (Canceled) A system as in claim 12, wherein said units bear indicia to facilitate mating units.

16. (Original) A building unit, comprising
a least one face having at least a first side and a second side, said sides having an irregular configuration, said sides being substantially rotational images of each other;

plural spacers projecting from each side, and

at least one primary rotational tessellation element defined by said spacers.

17. (Original) A building unit as in claim 16 wherein said first side and said second sides do not have identical configurations such that when a first side of one said unit is mated with a second side of another said unit a gap having a variable width is formed between the units.

18. (Canceled) A three dimensional structural unit, comprising
at least one face comprising a rotational tessellation;
said at least one face having at least two irregular sides extending there
from; and
at least one of said sides having connectors adapted to align adjacent units.

19. (Canceled) A structural unit as in claim 18, said rotational
tessellation comprising a primary element having
a first side extending in a generally radial direction relative to a first
vertex, said first side being irregularly shaped;
a second side extending in a generally radial direction relative to the
first vertex, said second side being substantially a rotational image of said first side and
being rotationally spaced from said first side by a first angle of 360 degrees divided by n ,
where n is an integer greater than or equal to 2;

a third side extending in a generally radial direction from a second vertex, said third side being irregularly shaped, said second vertex spaced apart from said first vertex; and

a fourth side extending in a generally radial direction from the second vertex, said fourth side being substantially a rotational image of said third side, said fourth side being rotationally spaced from said third side by a second angle, the sum of the first and second angles being 180, 240, 270 or 300 degrees.

20. (Canceled) A surface or structure comprised of building units adapted to be fit together, characterized in that said units comprise at least first units and second units; said first units comprising at least one face having at least some irregularly shaped sides, said first unit face comprising at least one primary tessellation element; said second units comprising at least one face having at least some irregularly shaped sides, said second unit face comprising at least two primary tessellation elements, and said second units being of a different size or shape than said first units; both said first units and said second units having sides that mate with other first units and mate with other second units; and said surface or structure being continuous without overlap between units or large gaps between units, and said surface or structure having a non-repeating pattern appearance.

21. (Canceled) A building unit having at least one face comprised of x primary elements, where x is an integer equal to or greater than 1, and said primary element comprising a first side extending in a generally radial direction relative to a first vertex; a second side extending in a generally radial direction relative to said first vertex and being rotationally spaced from said first side by a first angle of 360 degrees divided by n , where n is an integer greater than or equal to 3, said second side being substantially a rotational image of said first side; a third side extending in a generally radial direction from a second vertex, said second vertex being spaced apart from said first vertex; and a fourth side extending in a generally radial direction from said second vertex, said fourth side being substantially a rotational image of said third side, said fourth side being rotationally spaced from said third side by a second angle of 360 degrees divided by m , where m is an integer greater than or equal to 2, said first, second, third and fourth sides all comprising a series of straight-line segments, each said segment being angled relative to at least one adjacent segment such that the general appearance of each said side is irregular.

22. (Canceled) A building unit as in claim 21, wherein said primary element further comprises a fifth side and a sixth side extending in a generally radial direction relative to a third vertex, said sixth side being substantially a rotational image of said fifth side, said fifth and sixth sides being rotationally spaced by a third angle, and wherein said first, second and third angles are substantially equal.

23. (Canceled) A building unit as in claim 21, further comprising plural spacers, at least one said spacer projecting from each side, said at least one primary rotational tessellation element being defined by said spacers.

24. (Original) A building unit comprising at least one face having a three vertices and a pair of sides extending from each said vertex, the sides of each pair being irregularly shaped and being rotational images of each other, and spacers projecting from each side adjacent each said vertex, at least one primary rotational tessellation element defined by said spacers said spacers comprising indicia to facilitate matching of adjacent building units.

25. (Original) A building unit as in claim 24 wherein each of said irregularly shaped sides comprise a series two or more straight-line segments, each said segment being at an angle relative to at least one adjacent segment such that the general appearance of each of said sides is irregular.

26. (New) A building unit having at least one face comprising,
a first side extending in a generally radial direction relative to a first vertex,
said first side being irregularly shaped;

a second side extending in a generally radial direction relative to the first
vertex, said second side being substantially a rotational image of said first side and being
rotationally spaced from said first side by a first angle of 360 degrees divided by n , where
 n is an integer greater than or equal to 3;

a third side extending in a generally radial direction relative to a second
vertex, said third side being irregularly shaped, the second vertex being spaced from the
first vertex,

a fourth side extending in a generally radial direction relative to the second
vertex and being substantially a rotational image of said third side and rotationally spaced
there from by a second angle of 360 degrees divided by m , where m is an integer greater
than or equal to 2,

a fifth side extending in a generally radial direction relative to a third
vertex, said fifth side being irregularly shaped, the third vertex being spaced from the first
and second vertices,

a sixth side extending in a generally radial direction relative to the third
vertex and being substantially a rotational image of said fifth side and rotationally spaced
therefrom by a third angle,

the sum of the first, second and third angles being substantially 360 degrees,

each of said sides one through six having at least one spacer, and said spacers together defining a rotational tessellation comprised of x primary elements, wherein x is an integer equal to or greater than 1.

27. (New) A building unit as in claim 26, wherein said first, second and third angles are substantially equal.

28. (New) A building unit as in claim 26, wherein said spacers are located on an inner portion of the unit indented from said face.

29. (New) A building unit as in claim 26 wherein the configurations of sides two, four and six are substantial rotational images, but not identical configurations, of sides one, three and five, respectively.

30. (New) A building unit as in claim 26 wherein each of said irregularly shaped sides comprise a series two or more straight-line segments, each said segment being at an angle relative to at least one adjacent segment such that the general appearance of each of said sides is irregular.